

80/567541

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4359ptus sequence  
SEQUENCE LISTING

<110> POCCIA , Fabrizio et al

<120> Method and diagnostic tests based on flow cytometric analysis of  
antigen-specific T lymphocytes

<130> 4359PTUS

<140> PCT/EP2004/051726

<141> 2004-08-05

<150> RM2003A000386

<151> 2003-08-05

<160> 172

<170> PatentIn version 3.3

<210> 1

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<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<221> PEPTIDE

<222> (1)..(15)

<400> 1

Glu Lys Ile Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr Arg Leu  
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<210> 2

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<212> PRT

<213> Human immunodeficiency virus type 1

<220>

<221> peptide

<222> (1)..(15)

<400> 2

Pro Gly Gly Lys Lys Lys Tyr Arg Leu Lys His Leu Val Trp Ala  
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<210> 3

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<213> Human immunodeficiency virus type 1

<220>

<221> PEPTIDE

4359ptus sequence

<222> (1)..(15)

<400> 3

Pro Gly Gly Lys Lys Lys Tyr Arg Met Lys His Leu Val Trp Ala  
1 5 10 15

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<213> Human immunodeficiency virus type 1

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Lys Lys Tyr Arg Met Lys His Leu Val Trp Ala Ser Arg Glu Leu  
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<213> Human immunodeficiency virus type 1

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<221> peptide

<222> (1)..(15)

<400> 5

Lys His Leu Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val  
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Arg Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu Glu Thr  
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4359ptus sequence

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<221> peptide

<222> (1)..(15)

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Arg	Glu	Leu	Glu	Arg	Phe	Ala	Val	Asp	Pro	Gly	Leu	Leu	Glu	Thr
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<222> (1)..(15)

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Ser	Ala	Pro	Lys	Thr	Gly	Thr	Glu	Glu	Leu	Arg	Ser	Leu	Tyr	Asn
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<220>

<221> peptide

<222> (1)..(15)

<400> 9

Ser	Leu	Tyr	Asn	Thr	Val	Ala	Val	Leu	Tyr	Cys	Val	His	Gln	Arg
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<221> peptide

<222> (1)..(15)

<400> 10

Ser	Pro	Arg	Thr	Leu	Asn	Ala	Trp	Val	Lys	Val	Ile	Glu	Glu	Lys
1				5				10					15	

4359ptus sequence

<210> 11  
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Ser	Pro	Glu	Val	Ile	Pro	Met	Phe	Ser	Ala	Leu	Ser	Glu	Gly	Ala
1				5					10					15

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<400> 12

Ala	Thr	Pro	Gln	Asp	Leu	Asn	Met	Met	Leu	Asn	Ile	Val	Gly	Gly
1				5					10					15

<210> 13  
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Ala	Thr	Pro	Gln	Asp	Leu	Asn	Thr	Met	Leu	Asn	Ile	Val	Gly	Gly
1				5					10					15

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<220>  
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4359ptus sequence

<400> 14

Gln Asp Leu Asn Met Met Leu Asn Ile Val Gly Gly His Gln Ala  
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<210> 15

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<220>

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<222> (1)..(15)

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Met Met Leu Asn Ile Val Gly Gly His Gln Ala Ala Met Gln Met  
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<220>

<221> peptide

<222> (1)..(15)

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Ser Asn Pro Pro Ile Pro Val Gly Asp Ile Tyr Lys Arg Trp Ile  
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<220>

<221> peptide

<222> (1)..(15)

<400> 17

Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr  
1 5 10 15

<210> 18

<211> 15

<212> PRT

<213> Human immunodeficiency virus type 1

4359ptus sequence

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1				5					10					15

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<400> 19

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1				5					10					15

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<400> 20

Arg	Met	Tyr	Ser	Pro	Val	Ser	Ile	Leu	Asp	Ile	Lys	Gln	Gly	Pro
1				5					10					15

<210> 21  
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<400> 21

Asn	Ser	Ser	Arg	His	Ser	Gly	Lys	Cys	Arg	Arg	Gln	Arg	Arg	Ala	Leu
1				5					10					15	

<210> 22  
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 <212> PRT  
 <213> Human cytomegalovirus

4359ptus sequence

<400> 22

Ala Leu Ser Ala Pro Pro Leu Thr Phe Leu Ala Thr Thr Thr Thr  
1 5 10 15

<210> 23

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 23

Arg Gln Pro Arg Val His Arg Gly Thr Tyr His Leu Ile Gln Leu  
1 5 10 15

<210> 24

<211> 16

<212> PRT

<213> Human cytomegalovirus

<400> 24

Thr Tyr His Leu Ile Gln Leu His Leu Asp Leu Arg Pro Glu Glu Leu  
1 5 10 15

<210> 25

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 25

Arg Pro Glu Glu Leu Arg Asp Pro Phe Gln Ile Leu Leu Ser Thr  
1 5 10 15

<210> 26

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 26

Ser Asp Val Arg Pro Ala Phe Ser Leu Phe Pro Ala Arg Pro Gly  
1 5 10 15

<210> 27

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 27

Phe Pro Ala Arg Pro Gly Cys His Ile Leu Arg Ser Val Ile Asp

4359ptus sequence

1 5 10 15

<210> 28  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 28

Phe Ala Leu Arg Ile Ile Thr Pro Pro Leu Lys Arg Val Pro Leu  
 1 5 10 15

<210> 29  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 29

Phe Ala Leu Arg Ile Ile Thr Pro Pro Leu Lys Arg Val Pro Leu  
 1 5 10 15

<210> 30  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 30

Thr Asp Ala Asp Leu Thr Pro Thr Leu Thr Val Arg Val Arg His  
 1 5 10 15

<210> 31  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 31

Ile Ser Gly Pro Arg Gly Leu Thr Ser Arg Ile Ser Ala Arg Leu  
 1 5 10 15

<210> 32  
 <211> 16  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 32

Asp Pro Asn Glu Ser Pro Pro Asp Leu Thr Leu Ser Ser Leu Thr Leu  
 1 5 10 15

<210> 33



4359ptus sequence

<211> 15  
 <212> PRT  
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<400> 33

Thr Leu Tyr Gln Asp Gly Met Leu Arg Phe Asn Val Thr Cys Asp  
 1 5 10 15

<210> 34  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 34

Thr Glu Ala Pro Ala Asp Pro Val Ala Phe Arg Leu Arg Leu Arg  
 1 5 10 15

<210> 35  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 35

Phe Arg Leu Arg Leu Arg Arg Glu Thr Val Arg Arg Pro Phe Phe  
 1 5 10 15

<210> 36  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 36

Arg Arg Pro Phe Phe Ser Asp Ala Pro Leu Pro Tyr Phe Val Pro  
 1 5 10 15

<210> 37  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

<400> 37

Asp Glu Gly Leu Glu Val Arg Val Pro Tyr Glu Leu Thr Leu Lys  
 1 5 10 15

<210> 38  
 <211> 15  
 <212> PRT  
 <213> Human cytomegalovirus

4359ptus sequence

<400> 38

Arg	Ile	Tyr	Arg	Arg	Phe	Tyr	Gly	Pro	Tyr	Leu	Gly	Val	Phe	Val
1				5					10					15

<210> 39

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 39

Tyr	Leu	Gly	Val	Phe	Val	Pro	His	Asn	Arg	Gln	Gly	Leu	Lys	Met
1				5					10					15

<210> 40

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 40

Leu	Lys	Met	Pro	Val	Thr	Val	Trp	Leu	Pro	Arg	Ser	Trp	Leu	Glu
1				5					10					15

<210> 41

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 41

Thr	Val	Trp	Leu	Pro	Arg	Ser	Trp	Leu	Glu	Leu	Thr	Val	Leu	Val
1				5					10					15

<210> 42

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 42

Ala	Thr	Phe	Pro	Arg	Asp	Ala	Leu	Leu	Gly	Arg	Leu	Tyr	Phe	Ile
1				5					10					15

<210> 43

<211> 15

<212> PRT

<213> Human cytomegalovirus

<400> 43

Ala	Leu	Leu	Gly	Arg	Leu	Tyr	Phe	Ile	Ser	Ser	Lys	His	Thr	Leu
1				5					10					15

4359ptus sequence

<210> 44  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 44

Asn Ser Val Leu Leu Phe Leu Ala Phe Val Val Phe Leu Leu Val  
 1 5 10 15

<210> 45  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 45

Leu Leu Phe Leu Ala Phe Val Val Phe Leu Leu Val Thr Leu Ala  
 1 5 10 15

<210> 46  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 46

Leu Ala Trp Ile Met Leu Leu Gln Phe Ala Tyr Ser Asn Arg Asn  
 1 5 10 15

<210> 47  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 47

Met Glu Ser Glu Leu Val Ile Gly Ala Val Ile Ile Arg Gly His  
 1 5 10 15

<210> 48  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 48

Met Ala Cys Ile Val Gly Leu Met Trp Leu Ser Tyr Phe Val Ala  
 1 5 10 15

<210> 49  
 <211> 15

4359ptus sequence

<212> PRT

<213> Human coronavirus

<400> 49

Pro Leu Met Glu Ser Glu Leu Val Ile Gly Ala Val Ile Ile Arg  
1 5 10 15

<210> 50

<211> 15

<212> PRT

<213> Human coronavirus

<400> 50

Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr Tyr Leu  
1 5 10 15

<210> 51

<211> 15

<212> PRT

<213> Human coronavirus

<400> 51

Gln Gln Gln Gln Gly Gln Thr Val Thr Lys Lys Ser Ala Ala Glu  
1 5 10 15

<210> 52

<211> 15

<212> PRT

<213> Human coronavirus

<400> 52

Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr Tyr Leu Gly  
1 5 10 15

<210> 53

<211> 15

<212> PRT

<213> Human coronavirus

<400> 53

Glu Thr Ala Leu Ala Leu Leu Leu Leu Asp Arg Leu Asn Gln Leu  
1 5 10 15

<210> 54

<211> 15

<212> PRT

<213> Human coronavirus

<400> 54

4359ptus sequence

Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr Phe Glu  
1 5 10 15

<210> 55

<211> 15

<212> PRT

<213> Human coronavirus

<400> 55

Cys Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr  
1 5 10 15

<210> 56

<211> 15

<212> PRT

<213> Human coronavirus

<400> 56

Asn Cys Val Ala Asp Tyr Ser Val Leu Tyr Asn Ser Thr Phe Phe  
1 5 10 15

<210> 57

<211> 15

<212> PRT

<213> Human coronavirus

<400> 57

Ile Ala Pro Gly Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys  
1 5 10 15

<210> 58

<211> 15

<212> PRT

<213> Human coronavirus

<400> 58

Val Ser Leu Leu Arg Ser Thr Ser Gln Lys Ser Ile Val Ala Tyr  
1 5 10 15

<210> 59

<211> 15

<212> PRT

<213> Human coronavirus

<400> 59

Ser Ile Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser  
1 5 10 15

4359ptus sequence

<210> 60  
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<400> 60

Gln Val Lys Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly  
 1 5 10 15

<210> 61  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 61

Gln Ile Pro Phe Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile  
 1 5 10 15

<210> 62  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 62

Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val  
 1 5 10 15

<210> 63  
 <211> 15  
 <212> PRT  
 <213> Human coronavirus

<400> 63

Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile  
 1 5 10 15

<210> 64  
 <211> 15  
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 <213> Human coronavirus

<400> 64

Tyr Phe Val Gly Tyr Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr  
 1 5 10 15

<210> 65  
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 <212> PRT

4359ptus sequence

<213> Human coronavirus

<400> 65

Ser	Asn	Cys	Val	Ala	Asp	Tyr	Ser	Val	Leu	Tyr	Asn	Ser	Thr	Phe
1				5					10					15

<210> 66

<211> 15

<212> PRT

<213> Human coronavirus

<400> 66

Arg	Asp	Pro	Lys	Thr	Ser	Glu	Ile	Leu	Asp	Ile	Ser	Pro	Cys	Ser
1				5					10					15

<210> 67

<211> 15

<212> PRT

<213> Human coronavirus

<400> 67

Gly	Ser	Phe	Cys	Thr	Gln	Leu	Asn	Arg	Ala	Leu	Ser	Gly	Ile	Ala
1				5					10					15

<210> 68

<211> 15

<212> PRT

<213> Human coronavirus

<400> 68

Val	Lys	Gln	Met	Tyr	Lys	Thr	Pro	Thr	Leu	Lys	Tyr	Phe	Gly	Gly
1				5					10					15

<210> 69

<211> 15

<212> PRT

<213> Human coronavirus

<400> 69

Ala	Gly	Phe	Met	Lys	Gln	Tyr	Gly	Glu	Cys	Leu	Gly	Asp	Ile	Asn
1				5					10					15

<210> 70

<211> 15

<212> PRT

<213> Human coronavirus

<400> 70

4359ptus sequence

Pro Pro Leu Leu Thr Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala  
1 5 10 15

<210> 71  
<211> 15  
<212> PRT  
<213> Human coronavirus

<400> 71

Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val  
1 5 10 15

<210> 72  
<211> 15  
<212> PRT  
<213> Human coronavirus

<400> 72

Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn  
1 5 10 15

<210> 73  
<211> 15  
<212> PRT  
<213> Human coronavirus

<400> 73

Leu Asp Ser Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His  
1 5 10 15

<210> 74  
<211> 15  
<212> PRT  
<213> Bacillus anthracis

<400> 74

Glu Ser Glu Ser Ser Ser Gln Gly Leu Leu Gly Tyr Tyr Phe Ser  
1 5 10 15

<210> 75  
<211> 15  
<212> PRT  
<213> Bacillus anthracis

<400> 75

Asn Ile Pro Ser Glu Asn Gln Tyr Phe Gln Ser Ala Ile Trp Ser  
1 5 10 15



4359ptus sequence

<210> 76  
 <211> 15  
 <212> PRT  
 <213> Bacillus anthracis

<400> 76

Gln Tyr Gln Arg Glu Asn Pro Thr Glu Lys Gly Leu Asp Phe Lys  
 1 5 10 15

<210> 77  
 <211> 15  
 <212> PRT  
 <213> Bacillus anthracis

<400> 77

Ile Ser Asn Ile His Glu Lys Lys Gly Leu Thr Lys Tyr Lys Ser  
 1 5 10 15

<210> 78  
 <211> 15  
 <212> PRT  
 <213> Bacillus anthracis

<400> 78

Val Ser Pro Glu Ala Arg His Pro Leu Val Ala Ala Tyr Pro Ile  
 1 5 10 15

<210> 79  
 <211> 15  
 <212> PRT  
 <213> Bacillus anthracis

<400> 79

Pro Ile Tyr Asn Val Leu Pro Thr Thr Ser Leu Val Leu Gly Lys  
 1 5 10 15

<210> 80  
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 <212> PRT  
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<400> 80

Lys Ala Lys Glu Asn Gln Leu Ser Gln Ile Leu Ala Pro Asn Asn  
 1 5 10 15

<210> 81  
 <211> 15  
 <212> PRT  
 <213> Bacillus anthracis

4359ptus sequence

<400> 81

Gln Val Tyr Gly Asn Ile Ala Thr Tyr Asn Phe Glu Asn Gly Arg  
1 5 10 15

<210> 82

<211> 15

<212> PRT

<213> Bacillus anthracis

<400> 82

Asn Ile Asp Lys Asp Ile Arg Lys Ile Leu Ser Gly Tyr Ile Val  
1 5 10 15

<210> 83

<211> 15

<212> PRT

<213> Bacillus anthracis

<400> 83

Phe Ile Asp Phe Lys Lys Tyr Asn Asp Lys Leu Pro Leu Tyr Ile  
1 5 10 15

<210> 84

<211> 15

<212> PRT

<213> Variola virus

<400> 84

Ser Lys Asn Glu Ala Glu Lys Leu Ile Thr Ser Ala Phe Asp Leu  
1 5 10 15

<210> 85

<211> 15

<212> PRT

<213> Variola virus

<400> 85

Arg Gln Ser Ser Cys Lys Met Ala Leu Leu Phe Lys Asn Leu Ala  
1 5 10 15

<210> 86

<211> 15

<212> PRT

<213> Variola virus

<400> 86

Ile Cys Leu Lys Asp Lys Ser Glu Leu Tyr Ser Ala Tyr Lys Thr

4359ptus sequence

1 5 10 15

<210> 87  
<211> 15  
<212> PRT  
<213> Variola virus

<400> 87

Thr Arg Glu Arg Asn Lys Ile Val Glu Leu Glu Lys Glu Leu Asn  
1 5 10 15

<210> 88  
<211> 15  
<212> PRT  
<213> Variola virus

<400> 88

Ile Cys Ile Arg Ile Ser Met Val Ile Ser Leu Leu Ser Met Ile  
1 5 10 15

<210> 89  
<211> 15  
<212> PRT  
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<400> 89

Gly Leu Tyr Tyr Gln Gly Ser Cys Tyr Ile Phe His Ser Asp Tyr  
1 5 10 15

<210> 90  
<211> 15  
<212> PRT  
<213> Variola virus

<400> 90

Thr Leu Pro Asn Lys Ser Asp Val Leu Thr Thr Trp Leu Ile Asp  
1 5 10 15

<210> 91  
<211> 15  
<212> PRT  
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<400> 91

Gly His Ser Glu Thr Asp Thr Thr Thr Glu Tyr Leu Leu Pro Asn  
1 5 10 15

<210> 92

4359ptus sequence

<211> 15  
 <212> PRT  
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<400> 92

Gly Pro Ser Thr Tyr Tyr Pro His Tyr Lys Ser Cys Ala Leu Val  
 1 5 10 15

<210> 93  
 <211> 15  
 <212> PRT  
 <213> Variola virus

<400> 93

Thr Ser Pro Ala Arg Glu Asn Tyr Phe Met Arg Trp Leu Ser Asp  
 1 5 10 15

<210> 94  
 <211> 15  
 <212> PRT  
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<400> 94

Arg Glu Val Asn Lys Ala Leu Tyr Asp Leu Gln Arg Ser Ala Met  
 1 5 10 15

<210> 95  
 <211> 15  
 <212> PRT  
 <213> Variola virus

<400> 95

Val Ile Pro Ala Lys Lys Ile Ile Asp Trp Lys Asn Ala Asn Pro  
 1 5 10 15

<210> 96  
 <211> 15  
 <212> PRT  
 <213> Variola virus

<400> 96

Met Ala Ser Leu Leu Tyr Phe Ile Leu Phe Leu Leu Phe Val Cys  
 1 5 10 15

<210> 97  
 <211> 15  
 <212> PRT  
 <213> Variola virus

4359ptus sequence

<400> 97

Ile Phe Thr Asp Ala Ser Thr Val Ala Ser Ala Gln Ile Tyr Leu  
1 5 10 15

<210> 98

<211> 15

<212> PRT

<213> Variola virus

<400> 98

Thr Ser His Leu Asn Pro Ser Ile Glu Lys His Val Gly Ile Tyr  
1 5 10 15

<210> 99

<211> 15

<212> PRT

<213> Variola virus

<400> 99

Leu Ser Ala Lys Val Tyr Met Leu Glu Asn Ile Gln Val Met Lys  
1 5 10 15

<210> 100

<211> 15

<212> PRT

<213> Variola virus

<400> 100

Thr Tyr His Leu Glu Asn Asp Lys Ile Glu Asp Leu Ile Asn Gln  
1 5 10 15

<210> 101

<211> 15

<212> PRT

<213> Variola virus

<400> 101

Asp Ser Met Tyr Val Ile Pro Asp Glu Leu Ile Asp Val Leu Lys  
1 5 10 15

<210> 102

<211> 15

<212> PRT

<213> Variola virus

<400> 102

Ala Tyr Val Pro Ala Met Phe Thr Ala Ala Leu Asn Ile Gln Thr  
1 5 10 15

4359ptus sequence

<210> 103  
 <211> 15  
 <212> PRT  
 <213> Variola virus

<400> 103

Val Ile Gly Val Ile Ile Leu Ala Ala Leu Phe Met Tyr Tyr Ala  
 1 5 10 15

<210> 104  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 104

Lys Gly Glu Glu Glu Leu Gln Lys Tyr  
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<210> 105  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 105

Phe Thr Glu Ile Gln Lys Leu Val Leu  
 1 5

<210> 106  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 106

Phe Thr Glu Ser Arg Thr Leu His Arg  
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<210> 107  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 107

Ser Ser Leu Val Val Asp Glu Thr Tyr  
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<210> 108  
 <211> 9

4359ptus sequence

<212> PRT  
<213> Homo sapiens

<400> 108

Ile Thr Glu Cys Cys Lys Leu Thr Thr  
1 5

<210> 109  
<211> 9  
<212> PRT  
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<400> 109

Phe Ser Asp Asp Lys Phe Ile Phe His  
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<400> 110

Glu Thr Phe Met Asn Lys Phe Ile Tyr  
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<210> 111  
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<212> PRT  
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<400> 111

Ser Ser Glu Leu Met Ala Ile Thr Arg  
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<210> 112  
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<212> PRT  
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<400> 112

Ala Glu Glu Gly Gln Lys Leu Ile Ser  
1 5

<210> 113  
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<400> 113

4359ptus sequence

Trp Val Glu Ser Ile Phe Leu Ile Phe  
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<210> 114  
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<400> 114

Ile Ala Asp Phe Ser Gly Leu Leu Glu  
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<400> 115

Ser Arg Thr Leu His Arg Asn Glu Tyr  
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<210> 116  
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<400> 116

Ala Gln Phe Val Gln Glu Ala Thr Tyr  
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<210> 117  
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Phe Leu Ala Ser Phe Val His Glu Tyr  
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<400> 118

Val Ile Leu Arg Val Ala Lys Gly Tyr  
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4359ptus sequence

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<400> 119

Ile Gln Glu Ser Gln Ala Leu Ala Lys  
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<400> 120

Ile Thr Glu Glu Gln Leu Glu Ala Val  
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<400> 121

His Glu Lys Glu Ile Leu Glu Lys Tyr  
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<210> 122  
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<400> 122

Gln Ser Glu Glu Gly Arg His Asn Cys  
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<210> 123  
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<400> 123

Leu Ser Glu Pro Ala Glu Leu Thr Asp  
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<210> 124  
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4359ptus sequence

<213> Homo sapiens

<400> 124

Gly Ser Glu Pro Cys Ala Leu Pro Glu  
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<210> 125

<211> 9

<212> PRT

<213> Homo sapiens

<400> 125

Ser His Ser Phe Pro His Pro Leu Tyr  
1 5

<210> 126

<211> 9

<212> PRT

<213> Homo sapiens

<400> 126

Ser Pro Glu Cys Ile Phe Ile Cys Ala  
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<213> Homo sapiens

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Ala Ser Glu Ser Glu Met Ile Asn Ile  
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<213> Homo sapiens

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Glu Ser Glu Met Ile Asn Ile Asn Pro  
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<211> 9

<212> PRT

<213> Homo sapiens

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4359ptus sequence

Leu Thr Asp Ala Val Lys Val Met Asp  
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Ala Leu Pro Glu Arg Pro Ser Leu Tyr  
1 5

<210> 131  
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<400> 131

Ser Leu Tyr Thr Lys Val Val His Tyr  
1 5

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Ala Thr Glu Ser Pro Glu Cys Ile Phe  
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Arg Thr Glu Ile Asn Lys Ala Leu Leu  
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Glu Met Glu Asn Gly Glu Leu Ala Ser  
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4359ptus sequence

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Leu Tyr Asp Met Ser Leu Leu Lys Asn  
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<400> 136

Ser His Asp Leu Met Leu Leu Arg Leu  
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<400> 137

Ser Ile Glu Pro Glu Glu Phe Leu Thr  
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<400> 138

Arg Thr Glu Ile Asn Ser Glu Met Glu  
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<400> 139

Glu Pro Ala Leu Gly Thr Thr Cys Tyr  
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4359ptus sequence

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Ser Gly Asp Ser Gly Gly Pro Leu Val  
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<210> 141

<211> 9

<212> PRT

<213> Homo sapiens

<400> 141

Leu Pro Glu Arg Pro Ser Leu Tyr Thr  
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<210> 142

<211> 9

<212> PRT

<213> Homo sapiens

<400> 142

Ala Ser Glu Met Ile Asn Pro Arg Thr  
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<210> 143

<211> 9

<212> PRT

<213> Homo sapiens

<400> 143

Glu Val Asp Pro Ile Gly His Leu Tyr  
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<210> 144

<211> 9

<212> PRT

<213> Homo sapiens

<400> 144

Ser Ser Leu Pro Thr Thr Met Asn Tyr  
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<211> 9

<212> PRT

<213> Homo sapiens

<400> 145

Ile Ser Gly Gly Pro His Ile Ser Tyr

4359ptus sequence

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Leu Val His Phe Leu Leu Leu Lys Tyr  
 1 5

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Phe Ala Thr Cys Leu Gly Leu Ser Tyr  
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Gly Ser Val Val Gly Asn Trp Gln Tyr  
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Leu Gly Asp Pro Lys Lys Leu Leu Thr  
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Phe Val Gln Glu Asn Tyr Leu Glu Tyr  
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<210> 151

4359ptus sequence

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<400> 151

Gly Glu Asn Phe Ala Met Ile Leu Tyr  
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<400> 152

Ala Thr Glu Glu Gln Glu Ala Ala Ser  
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<210> 153  
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<400> 153

Ala Thr Glu Asp Ala Asn Thr Ile Gly  
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<400> 154

Arg Gly Glu Ala Leu Gly Leu Val Gly  
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<210> 155  
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<400> 155

Glu Ser Glu Phe Gln Ala Ala Leu Ser  
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<210> 156  
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4359ptus sequence

<400> 156

Gly Ser Asp Pro Ala Cys Tyr Glu Phe  
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<210> 157

<211> 9

<212> PRT

<213> Homo sapiens

<400> 157

Ser Pro Asp Pro Pro Gln Ser Pro Gln  
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<210> 158

<211> 9

<212> PRT

<213> Homo sapiens

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Gly Ile Glu Met Cys Ala Ala Asn Tyr  
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<210> 159

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<213> Homo sapiens

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Ala Gln Asp Ala Pro Pro Leu Pro Val  
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<213> Homo sapiens

<400> 160

Ala Ala Asp His Arg Gln Leu Gln Leu  
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<210> 161

<211> 9

<212> PRT

<213> Homo sapiens

<400> 161

Arg Thr Glu Ile Asn His Met Ser Ala  
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4359ptus sequence

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<400> 162

Gly Pro Glu Ser Arg Leu Leu Glu Phe  
1 5

<210> 163  
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<400> 163

Phe Thr Val Ser Gly Asn Ile Leu Thr  
1 5

<210> 164  
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<400> 164

Pro Glu Ser Arg Leu Leu Glu Phe Tyr  
1 5

<210> 165  
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<400> 165

Leu Pro Val Pro Gly Val Leu Leu Lys  
1 5

<210> 166  
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<400> 166

Cys Phe Leu Pro Val Phe Leu Ala Gln  
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<210> 167  
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4359ptus sequence

<212> PRT  
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<400> 167

Ser Ser Cys Leu Gln Gln Leu Ser Leu  
1 5

<210> 168  
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<212> PRT  
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<400> 168

Asp Ala Asp Gly Pro Gly Gly Pro Gly  
1 5

<210> 169  
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<212> PRT  
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<400> 169

Ile Pro Asp Gly Pro Gly Gly Asn Ala  
1 5

<210> 170  
<211> 9  
<212> PRT  
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<400> 170

Leu Leu Glu Phe Tyr Leu Ala Met Pro  
1 5

<210> 171  
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<212> PRT  
<213> Homo sapiens

<400> 171

Asn Tyr Glu Ser Pro Arg Thr Glu Ile  
1 5

<210> 172  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 172

4359ptus sequence

Gln Ala Glu Gly Arg Gly Thr Gly Gly  
1 5